1135-C1-1636   **Daniel E. Otero*** (`otero@xavier.edu`). *Determining the Determinant: learning in the footsteps of Cramer and Cauchy.*

This talk will report on the development of a Primary Source Project by the author (under the aegis of the NSF-supported TRIUMPHS grant) for use in a standard linear algebra course to assist students in their understanding of the determinant, its computation and its fundamental properties. The design of the PSP has students read and work through works by Gabriel Cramer — in which he proposes his eponymous Rule — and by Augustin-Louis Cauchy, who, in his early twenties, laid out a fully developed theory of alternating symmetric polynomial functions, including a framework for the analysis of permutations on n objects and their signs, together with an early form of matrix multiplication, from which the fundamental properties of the determinant fall like ripe fruit from a tree. Time will be devoted to a discussion of the pedagogical effects of having undergraduate students "read the masters" as part of their initial introduction to mathematical ideas. (Received September 24, 2017)

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